

1 Introduction

Use this document for quick installation and setup.

If you experience problems or need more information, see the *Summit T3-8 User Manual* on the Installation CD or at the LeCroy web site.

2 Components

The analyzer package includes the following components:

- Summit T3-8 analyzer box
- AC Power Cable
- USB and Ethernet cables
- PETracer Software program CD-ROM

Depending on configuration, the package may also include:

- One probe cable for x8 recording
- Slot interposer
- MidBus Probe kit

Please see the *Summit T3-8 User Manual* on the installation CD for component specifications and further details.



Summit T3-8 Protocol Analyzer

3 Unpacking the Analyzer

Inspect the received shipping container for any damage. Unpack the container and account for each of the system components listed on the accompanying packing list. Visually inspect each component for absence of damage.

In the event of damage, notify the shipper and LeCroy Corporation. Retain all shipping materials for shipper's inspection.

4 Front Panel Description



The Analyzer has the following features on the front:

- [1] **Power Switch** (black): 1 = On and 0 = Off.
- [2] **UPSTREAM [7:0] connector**: Connection to the probe for the capture of upstream direction of the link.
- [3] **Speed LEDs**: Indicate speed setting the analyzer is using for each traffic direction.
- [4] **LCD Menus**: Allows you to configure Summit T3-8 and view status.
- [5] **Navigation Buttons**: Navigate through the LCD menu.
- [6] **DOWNSTREAM [7:0] connector**: Connection to the probe for the capture of downstream direction of the link.
- [7] **Trigger IN and Out**: Provide external trigger capabilities. You can configure Summit T3-8 to trigger external equipment using Trigger Out. You can use Trigger In to trigger the Analyzer from another device.
- [8] **Expansion Slot**: Future use.
- [9] **USB Type B Host Computer Connector**: To connect the Analyzer to the Host PC using a USB connection.
- [10] **Ethernet Port**: 1 GIGE Connectivity allows connection to the analyzer through an Ethernet network.

5 Rear Panel Description

The rear panel of the Analyzer has:
Wide-range AC Connector Module

- Power socket
- Enclosed 5.0 A 250 V fuse

6 Interposers and Probes

Gen3 Slot Interposer

The Gen3 Slot Interposer is designed for use with the Summit T3-8 Analyzer and supports lane widths from x1 to x8 at data rates of 2.5 GT/s (Gen1), 5.0 GT/s (Gen2), or 8.0 GT/s (Gen3). A separate interposer is used for each lane width that you would like to probe. Lane reducers should NOT be used with the Gen3 Slot Interposer. For lane widths up to x8, one Analyzer Y-cable is required.

7 Installing the Software

The *PETracer* software operates all of LeCroy's PCI Express Protocol Analyzer and Exerciser products and should be installed on a Microsoft® Windows®-based host PC. You need to install the *PETracer* software on the Host computer before attaching the Analyzer to the system. The minimum requirements for the host computer are:

- Microsoft Windows 7, Windows XP, or Windows Vista
- Processor with clock speed of 1 GHz or higher
- 2 GB of RAM
- Hard drive with at least 250 MB of free space for software installation and additional space for storing recorded data
- Display with at least 1024 x 768 resolution, with 16-bit color
- USB 2.0 port

LCD Menus

The Summit T3-8 has a front LCD panel that displays the computer name that is currently connected to the system, the unit serial number, and the current network configuration. If no computer is connected to the unit, the LCD panel displays **Available**.

The LCD panel also allows you to configure network settings for the analyzer. Use the **Up** and **Down** keypad buttons to cycle through the menu. Press the **Center** button to select.

Setup Static or Dynamic IP Mode

1. Use the **Up** and **Down** buttons to navigate to the **Set IP Configuration** menu.
2. Press the **Center** button to start the setup.
3. Use the **Up** and **Down** buttons to select **Static** or **Dynamic** IP configuration.
4. If you select the Static IP network configuration, you must specify the IP address, Subnet mask, and Gateway. Use the **Up** and **Down** buttons to navigate to the IP address, Subnet mask, or Gateway.
5. Press the **Center** button to enter edit mode.
6. In edit mode, use the **Left** and **Right** buttons to move the blinking cursor to any digit.
7. Use the **Up** and **Down** buttons to modify the digit.
8. After finishing modifications to the IP address, Subnet mask, or Gateway, press the **Center** button to return to the menu.
9. After you specify the IP address, Subnet mask, and Gateway, use the **Up** and **Down** buttons to navigate to the **Accept and Reboot** menu item. Press the **Center** button to apply the new settings and restart the analyzer.

Note: To cancel your modifications, select the **Cancel Changes** menu item.

Warning Do not open the enclosure. No operator serviceable parts are inside.

Expansion Slot: Future use

Warning! For continued protection against fire, replace fuse only with the type and rating specified above.

Warning Interposer has static-sensitive components. Handle only at static-safe work stations.

Gen3 MidBus Probe

The Gen3 MidBus Probe is designed for use with the Summit T3-8 Analyzer and supports lane widths from x1 to x8 at data rates of 2.5 GT/s (Gen1), 5.0 GT/s (Gen2), or 8.0 GT/s (Gen3).

In general, the higher the performance of the host computer, the better user experience you get. Please refer to the **Readme** notes and *Summit T3-8 User Manual* for recommended configurations and additional information.

User manuals for your LeCroy PCI Express products can be found in **Start > Programs > LeCroy > PETracer > PETracer-Trainer Manuals**

To install the software, follow the steps below:

1. Insert the CD into the CD-ROM drive of the PC that will control the Analyzer. The installation window displays links to software installation, user manuals, application notes, and data sheets.
2. Select **Install PCIe Protocol Suite** and follow the onscreen instructions. The *PETracer* software installs automatically on the PC hard disk. During installation, all necessary USB drivers will be installed.
3. To start the application, launch the *PETracer* program from the Start menu: **Start > Programs > LeCroy > PETracer > LeCroy PETracer**

Software installation can also be downloaded from the LeCroy website.

8 Setting Up and Connecting the Summit T3-8 Analyzer

You can connect the Analyzer to the host machine using USB or Ethernet.

Using an Ethernet Connection

To set up the Analyzer using an Ethernet connection:

1. Install *PETracer* software on the host PC.
2. Connect the Analyzer to a 100-volt to 240-volt, 50 Hz to 60 Hz, 120 W power outlet using the provided power cord.
3. Connect the Ethernet cable between the Ethernet port on the Analyzer and a Ethernet port in the local network.
4. Turn on the power switch on the front of the analyzer.

Note 1: No driver installation is needed for Summit T3-8 to operate over a network.

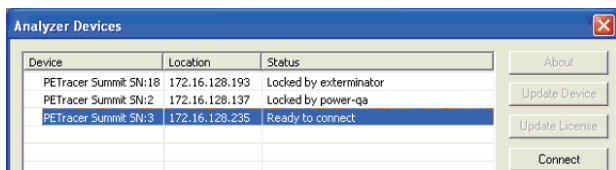
Note 2: At power-on, the Analyzer initializes and performs a self-diagnostic. The results are reflected by messages on the Summit T3-8 LCD display. If the LCD display indicates failure, call LeCroy Customer Support for assistance.

Note 3: Summit T3-8 is configured at the factory to use dynamic IP setting and will get all required network parameters from the DHCP server on your network. If the DHCP server is not available, or to connect Summit T3-8 directly to the host computer, you can reconfigure the network settings of Summit T3-8 using the menus in the LCD display on the front of the analyzer (see the "LCD Menus" part of section 4 of this document).

Connecting to Summit T3-8 in the software

Start the *PETracer* software and perform the following procedure to connect to a Summit T3-8 analyzer over the network.

1. Select the **Setup > All connected devices...** menu in the *PETracer* application to display the Analyzer Devices dialog.



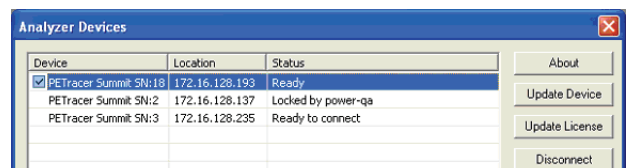
The Summit devices in the list are marked:

- **Locked:** Some other client on the network is already connected to that device
- **Ready to connect:** Available for connection

2. Select your Summit T3-8 device in the list and press the **Connect** button to execute the connection procedure. After the connection is established, the application displays the Connection Properties dialog.
3. Select an option:
 - **Automatically connect to the device:** When the application is started or when the named device appears on the network while the *PETracer* application is running on this computer, the *PETracer* application will try to connect to the named device.
 - **Ask if I want to connect to the device:** When the application is started or when the named device appears on the network while the *PETracer* application is running on this computer, the *PETracer* application will display a message box allowing you to connect to the named device.
 - **Take no action:** When you start the application or when the named device appears on the network while the *PETracer* application is running on this computer, you must connect manually to use the named device.

Note: When you close the application on this computer (or you perform manual disconnect), the application disconnects from the device.

4. Press **OK** in the Connection Properties dialog. After you finish the connect procedure, the Summit T3-8 to which you have connected is marked as **Ready** and you can use it for recording.



Note: To disconnect from a device, display this dialog, select the device, and click the **Disconnect** button.

Note 2: Summit T3-8 will not appear in the Analyzer Device dialog if it is connected on a different Subnet on your local network. You can connect to it on the Subnet by specifying its IP address in the Add Device dialog.

Using a USB Connection

To set up the Analyzer using a USB connection:

1. Install PETracer software on the host PC.
2. Connect the Analyzer to a 100-volt to 240-volt, 50 Hz to 60 Hz, 120 W power outlet using the provided power cord.
3. Connect the USB port to a USB port on the PC using a USB cable.
4. Turn on the power switch on the front of the analyzer.

Note: At power-on, the Analyzer initializes and performs a self-diagnostic. The results are reflected by messages on the Summit T3-8 LCD display. If the LCD display indicates failure, call LeCroy Customer Support for assistance.

5. Summit T3-8 will be recognized by the host computer as a USB device.

Follow the Microsoft® Windows® on-screen Plug-and-Play instructions for the automatic installation of the Analyzer as a USB device on your analyzing PC. (The required USB drivers are included on the Installation CD and were installed on your system when you installed the software.)

Click **Finish** when you see the message that says "Windows has finished installing the software that your new hardware requires" and the file has been installed in your PC.

8. Start the PETracer software, so you can start working with Summit T3-8.

9

Making Your First Recording

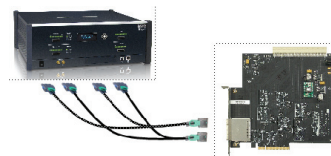
Connect Summit T3-8 to the system under test using an interposer or probe, and then configure the Recording Options. You can then test the Analyzer by creating a short snapshot recording.

Connect Summit T3-8 to System under Test using an Interposer or Probe

For a slot interposer, do the following:

1. Insert the slot interposer into a PCI Express slot that you want to monitor.
2. Insert the PCI Express device into the PCIe connector on top of the interposer.
3. Connect Summit T3-8 to the interposer with Analyzer Y cables. Connect cable Side A to the Upstream port of the Analyzer, and connect cable Side B to the Downstream port.
4. Connect power to the interposer using the provided 12-V power adapter.

For Mid Bus Probe or other types of probes and interposers, please see the *Summit T3-8 User Manual*.



Configure Recording Options

1. From the **Setup** menu, select **Recording Options**.
2. Select the **General** tab and then choose **Summit T3-8** as the Analyzer type.
3. In the **Link** section, specify the lane width of the PCI Express link to be analyzed. The rest of the settings in this section can be left at the factory defaults for most PCI Express systems.
4. For multi-lane PCI Express links, the Analyzer needs to observe link training to record link traffic correctly.
5. Click **OK** at the bottom of the Recording Options dialog box to apply the Analyzer recording settings specified.

Start Recording

1. Start a recording session by clicking the **Record** button in the toolbar. Recording is tracked and reported on an activity meter in the status bar.
2. After the recording buffer fills, uploading starts automatically. PCI Express traffic is saved to the hard drive as the file specified in the recording options, and this file is opened in the application for you to view the traffic.

Note: You can interrupt a session by pressing the **Stop** button. If Recording is finished and Upload has started but has not finished, a message box appears. You can:

- Continue uploading.
- Abort the upload and flush the data.
- Abort the upload and preserve all the previously saved data.

LeCroy Customer Support

Online Download

Periodically check the LeCroy Protocol Solutions Group web site for software updates and other support related to this product. Software updates are available to users with a current Maintenance Agreement.

Mail: 3385 Scott Blvd., Santa Clara, CA 95054-3115
Web: <http://www.lecroy.com/Support/SoftwareDownload/>
E-mail: psgsupport@lecroy.com
Tel: (800) 909-7112 (USA and Canada)
Tel: (408) 653-1260 (worldwide)
Fax: (408) 727-6622 (worldwide)

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